

**US DEPARTMENT OF  
DEFENSE (DoD) COMBINED  
ACTIVE DUTY  
EYE INJURY SUMMARY  
CALENDAR YEAR 2010**

Approved for public release, distribution unlimited

2013



# CY 2010 DEPARTMENT OF DEFENSE (DoD) COMBINED ACTIVE DUTY (AD) EYE INJURY REPORT SUMMARY

**INTRODUCTION:** In 2010 the Armed Forces Health Surveillance Center (AFHSC) and Tri-Service Vision Conservation and Readiness Program (TSVCRP) of the US Army Public Health Command (USAPHC) began development of an Annual Active Duty Military Eye Injury Summary that would detail cause and type of injury along with demographics of eye injuries (Age, Gender, Rank, Occupational Group).

The first edition of the summary and annual summaries back through calendar year 2000, were produced in the spring of 2011. An analysis of years 2000-2010 was published in the May 2011 Medical Surveillance Monthly Report (MSMR). The AFHSC also developed a Case Definition for Eye Injuries that details the code set and methodology used to develop the summaries. Both the MSMR Article and Case Definition for Eye Injuries are available on the AFHSC website: <http://afhsc.army.mil/home>.

This summary contains detailed data, along with a set of summary tables detailing Ambulatory and Hospitalization rates (per 1000 person-years) for Injury Group, Cause of Injury and Occupational Group. Summary tables for Deployment-Associated Eye Injuries detailing frequency of Eye Injuries by Type of Injury and Occupational Group are also provided. Occupational Group data is for Enlisted members only. Deployment-Associated Eye Injuries are presented without regard to Ambulatory or Hospitalized status.

As one of the underlying goals of the summary is to make eye injury surveillance data accessible and useable, individual annual eye injury summaries for all years and all services (Combined DoD, Army, Navy, Air Force, Marine Corps and Coast Guard) are posted on the USAPHC public website.

For questions or additional information regarding the summaries please contact the TSVCRP:

By Email: [usarmy.apg.medcom-phc.mbx.dcpm-tri-service-optometry@mail.mil](mailto:usarmy.apg.medcom-phc.mbx.dcpm-tri-service-optometry@mail.mil)

Telephone: 410-436-2714 FAX: 410-436-1325

Additional program information and educational materials can be found at: <http://dodvision.com/> and the USAPHC Public Website at: <http://phc.amedd.army.mil/Pages/default.aspx>

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**INJURY CODE GROUP DETAILS:** The following code groupings were used to develop the summary. Additional details may be found in the AFHSC Case Definition available at: <http://afhsc.army.mil/home>.

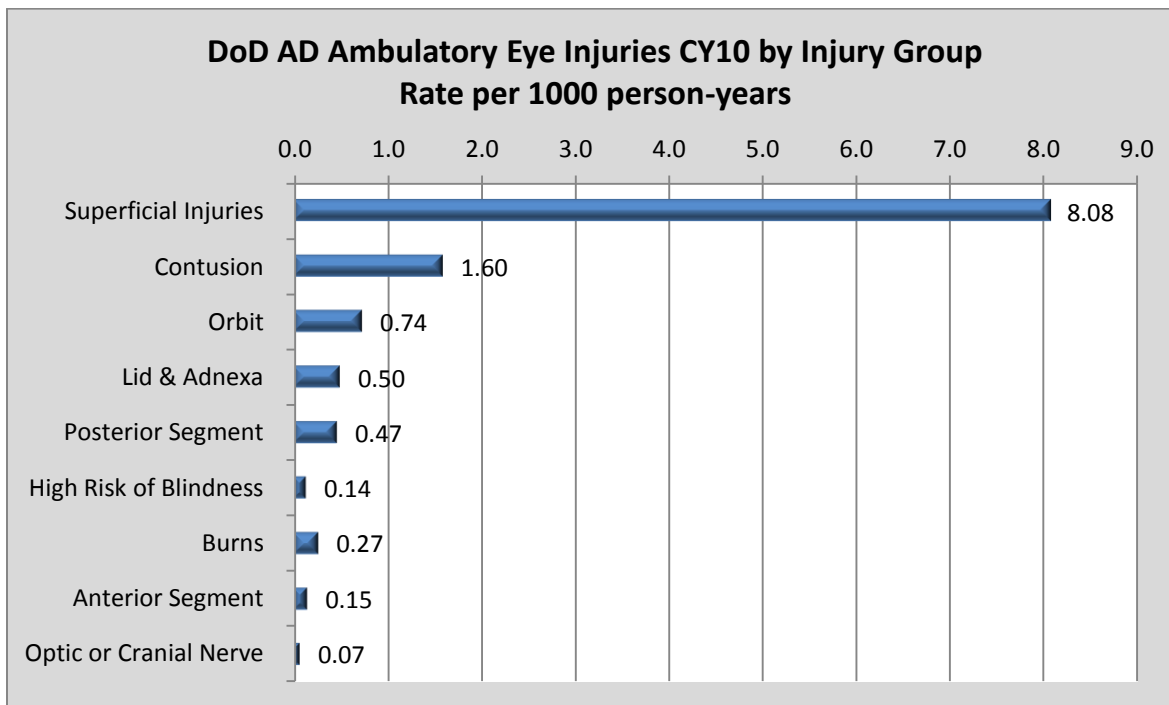
- 1) **Superficial:** all 918 series codes (superficial injury of eye and adnexa) and all 930 series codes (foreign body on external eye).
- 2) **Contusion:** all 921 series codes (contusion of eye and adnexa).
- 3) **Orbit:** All 802 series codes (fracture of face bones), 870.3 and 870.4 (penetrating wound of orbit without and with foreign body) and 376.32 (orbital hemorrhage).
- 4) **Lid/adnexa:** all 870 series codes (open wound of ocular adnexa) with the exception of 870.3 and 870.4 (see orbit above).
- 5) **Posterior segment:** 362.81 (retinal hemorrhage), all 361.0x series codes (retinal detachment with retinal defect), 363.61 (choroidal hemorrhage, unspecified), 363.63 (choroidal rupture), 379.23 (vitreous hemorrhage), 360.00 and 360.01 (purulent and acute endophthalmitis).
- 6) **High risk of blindness:** all 871 series codes (open wound of eyeball).
- 7) **Burns:** all 940 series codes (burn confined to eye and adnexa) as well as all 940.x2 codes (burns to eye with other parts of face, head and neck).
- 8) **Anterior segment:** 364.41 (hyphema), 366.21 and 366.22 (localized and total traumatic cataract), and 364.76 (iridodialysis).
- 9) **Optic/cranial nerve:** 950.0 (optic nerve injury), 950.1 (injury to optic chiasm), 950.9 (injury to optic nerve and pathways, unspecified), 951.0 (injury to oculomotor nerve), 951.1 (injury to trochlear nerve) and 951.3 (injury to abducens nerve).

**DETAILS FOR TOTAL NUMBERS:** Because patients may have been coded with more than one injury group or cause of injury, the sum of cases by injury group and the sum of cases by causes of injury will be greater than the total number of patients.

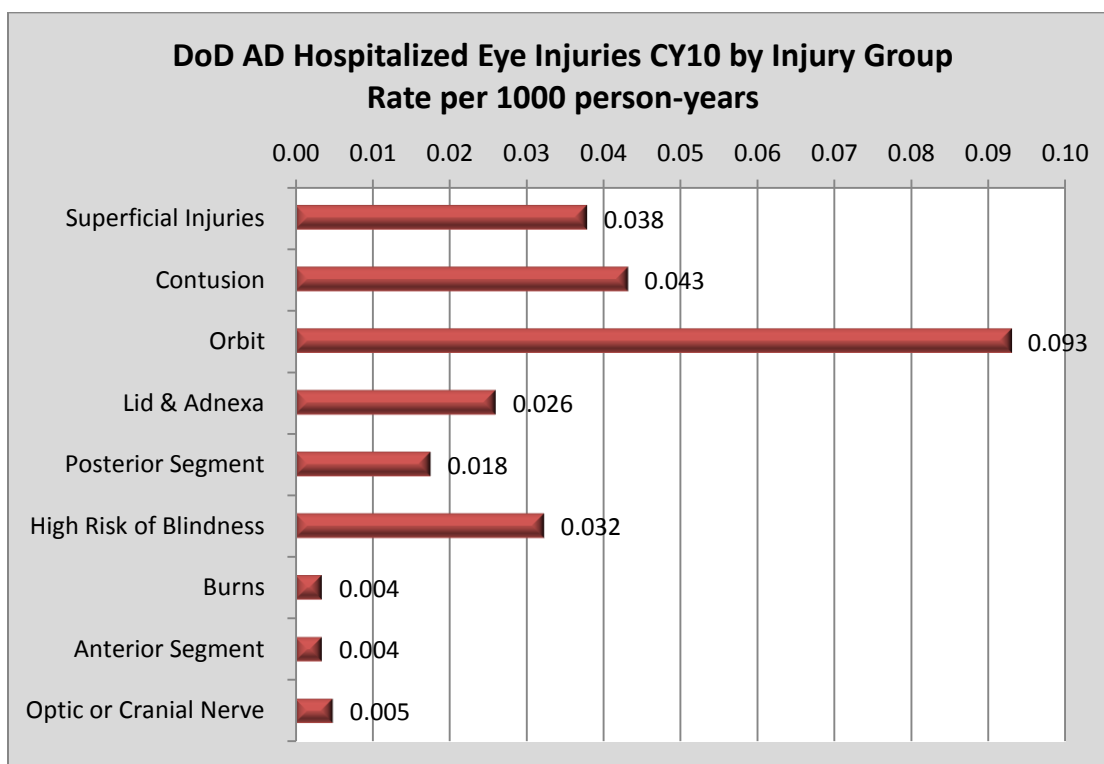
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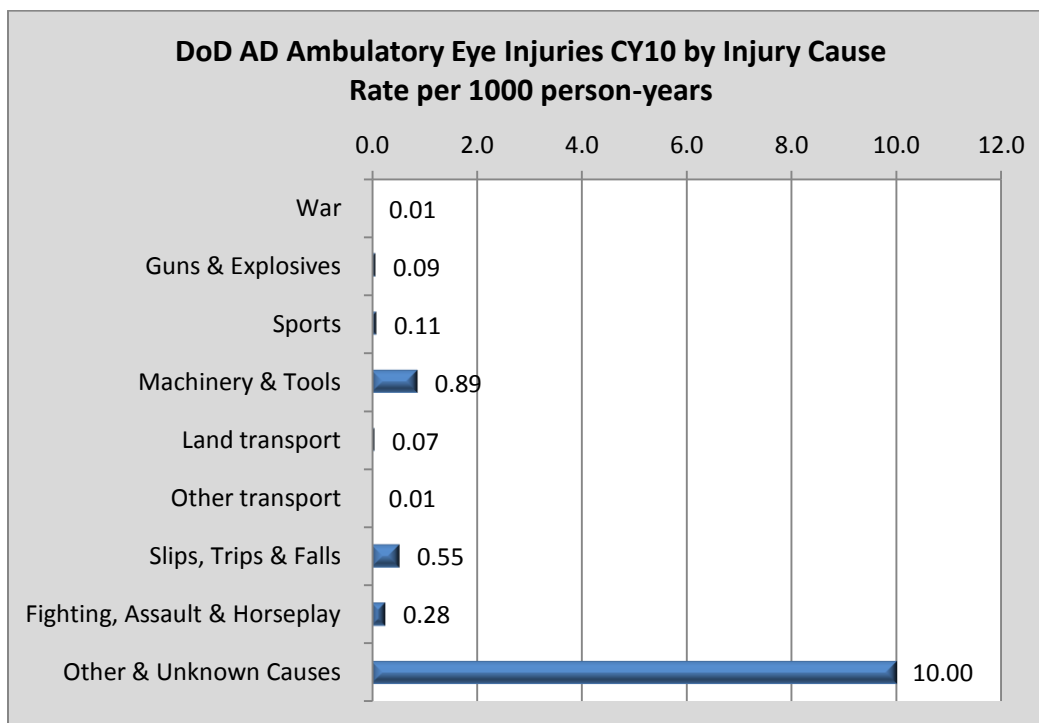
Please note the difference in scale between Ambulatory and Hospitalized graphs



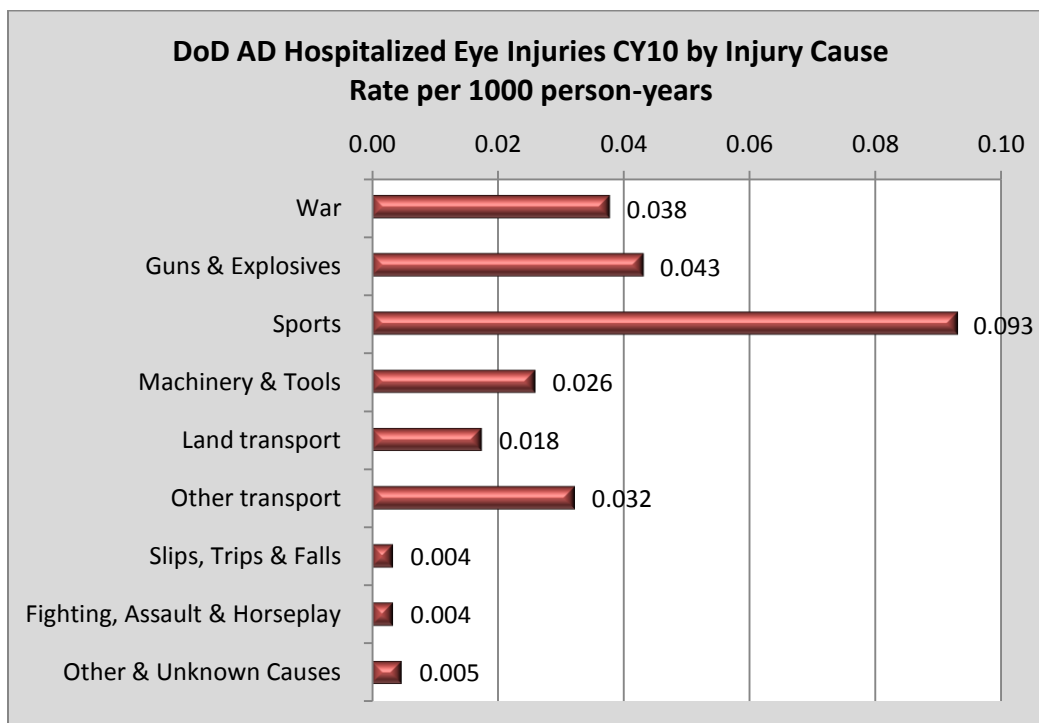
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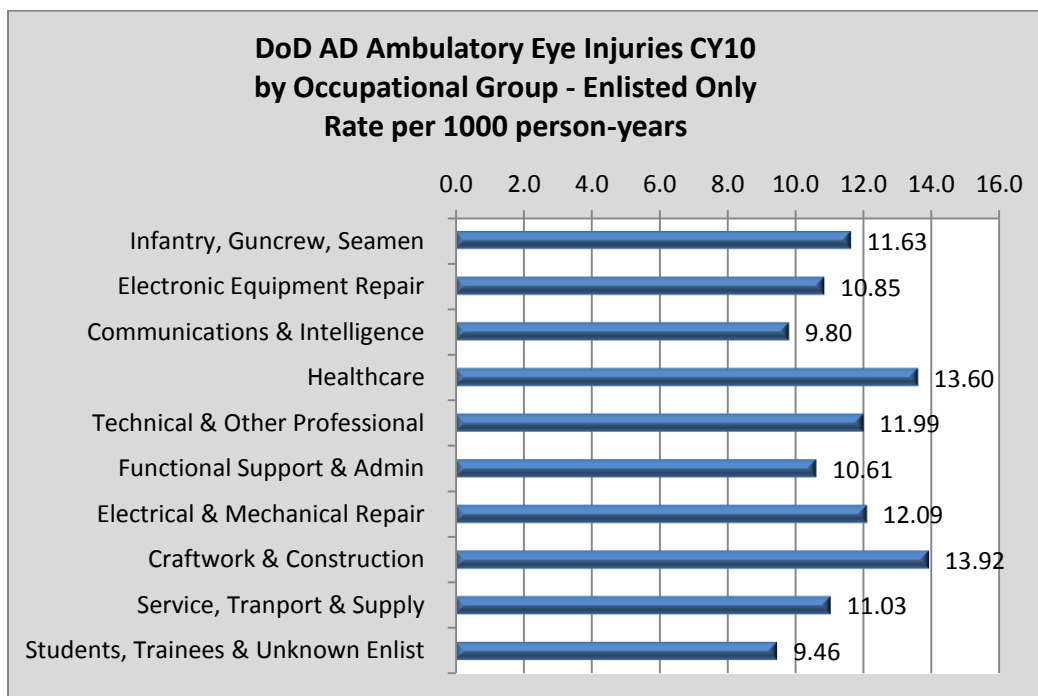
Please note the difference in scale between Ambulatory and Hospitalized graphs



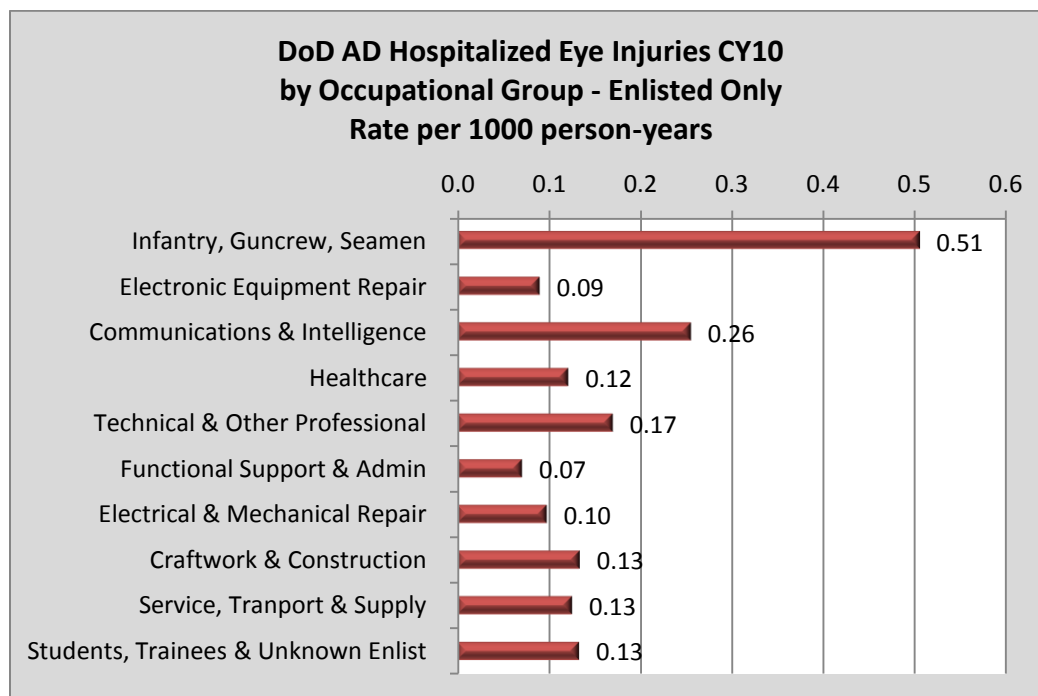
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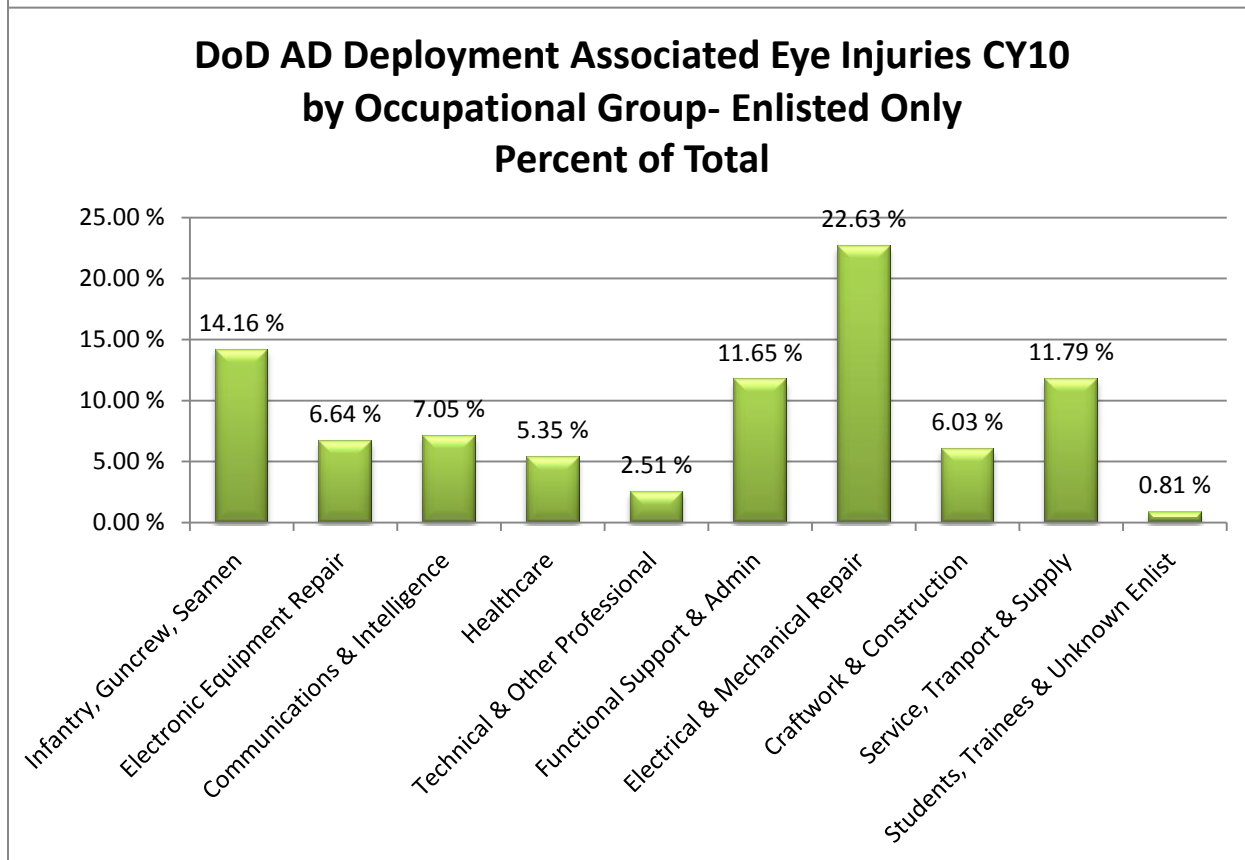
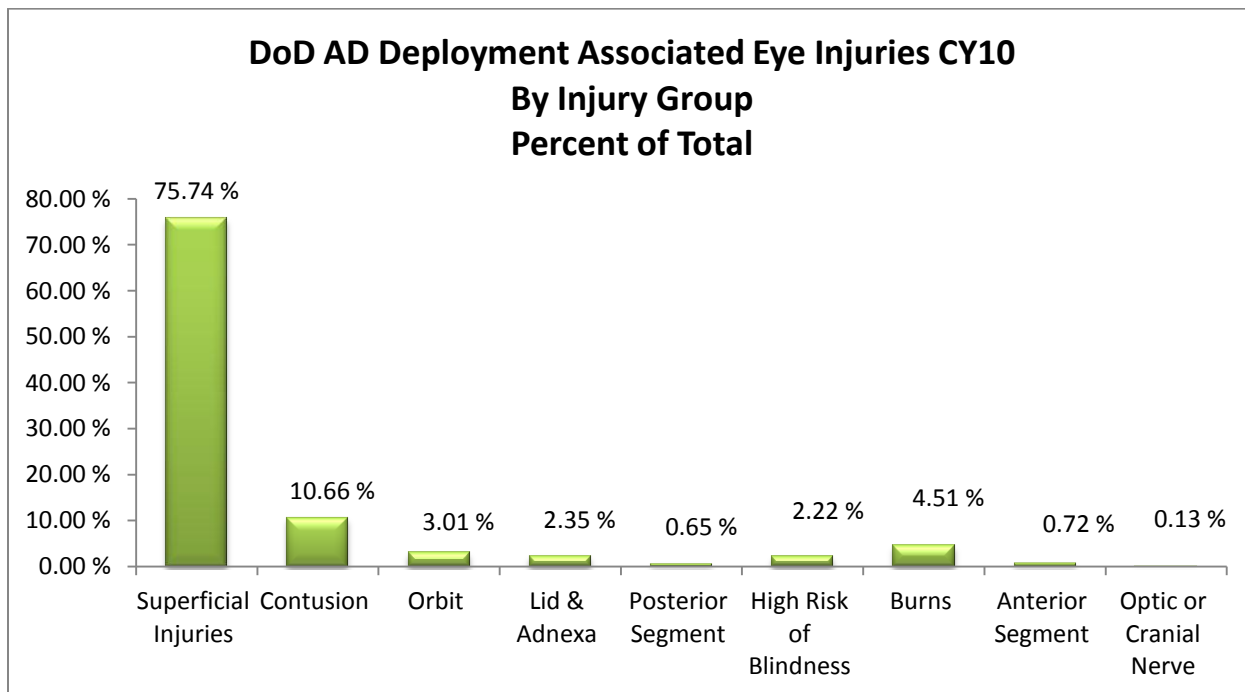
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# CY 2010 DEPARTMENT OF DEFENSE (DoD) COMBINED ACTIVE DUTY (AD) EYE INJURY REPORT SUMMARY

		2010											
		Ambulatory MTF Visits				Deployment-Associated Healthcare				Hospitalizations			
		Primary		All Diagnoses		Primary		All Diagnoses		Primary		All Diagnoses	
		Count	Rate¹	Count	Rate	Count	% total³	Count	% total³	Count	Rate	Count	Rate
ALL ACTIVE COMPONENT													
	Total	12,721	8.93	15,803	11.09	1,395	100.00	1,476	100.00	51	0.04	243	0.17
	Superficial Injuries	9,737	6.84	11,509	8.08	1,105	76.47	1,158	75.74	6	0.00	54	0.04
	Contusion	1,680	1.19	2,258	1.60	149	10.31	163	10.66	18	0.01	61	0.04
	Orbit	676	0.48	1,047	0.74	40	2.77	46	3.01	41	0.03	132	0.09
	Lid & Adnexa	574	0.40	712	0.50	33	2.28	36	2.35	8	0.01	37	0.03
	Posterior Segment	391	0.28	669	0.47	8	0.55	10	0.65	11	0.01	25	0.02
	High Risk of Blindness	162	0.11	197	0.14	34	2.35	34	2.22	19	0.01	46	0.03
	Burns	333	0.23	384	0.27	66	4.57	69	4.51	2	0.00	5	0.00
	Anterior Segment	174	0.12	217	0.15	9	0.62	11	0.72	2	0.00	5	0.00
	Optic or Cranial Nerve	65	0.05	104	0.07	1	0.07	2	0.13	1	0.00	7	0.00
	Male	10,861	8.90	13,511	11.07	1,177	84.37	1,242	84.15	48	0.04	222	0.18
	Female	1,860	9.11	2,292	11.23	218	15.63	234	15.85	3	0.01	21	0.10
	War	12	0.01	16	0.01	not assessed²				16	0.01	55	0.039
	Guns & Explosives	112	0.08	128	0.09					32	0.02	131	0.092
	Sports	124	0.09	155	0.11					8	0.01	14	0.010
	Machinery & Tools	1,190	0.84	1,262	0.89					5	0.00	8	0.006
	Land transport	51	0.04	101	0.07					2	0.00	17	0.012
	Other transport	3	0.00	11	0.01					0	0.00	5	0.004
	Slips, Trips & Falls	685	0.48	780	0.55					7	0.00	15	0.011
	Fighting, Assault & Horseplay	262	0.18	397	0.28					11	0.01	30	0.021
	Other & Unknown Causes	11,353	7.97	14,247	10.00					27	0.02	97	0.068
ENLISTED (all diagnoses combined)													
	Enlisted	10,835	9.16	13,479	11.39	1,235	88.53	1,308	88.62	48	0.04	222	0.19
	<20	648	6.28	790	7.66	53	3.80	56	3.79	4	0.04	16	0.16
	20-24	4,125	9.14	5,210	11.55	532	38.14	564	38.21	27	0.06	116	0.26
	25-29	2,844	10.09	3,542	12.56	302	21.65	322	21.82	13	0.05	55	0.20
	30-34	1,515	9.54	1,861	11.72	158	11.33	166	11.25	2	0.01	19	0.12
	35-39	970	8.45	1,176	10.25	113	8.10	120	8.13	0	0.00	10	0.09
	>=40	733	10.02	900	12.31	77	5.52	80	5.42	2	0.03	6	0.08
	E0-E4	5,817	9.39	7,385	11.92	729	52.26	775	52.51	39	0.06	150	0.24
	E5-E9	5,018	8.91	6,094	10.82	506	36.27	533	36.11	9	0.02	72	0.13
	Infantry, Guncrew, Seamen	1,786	8.95	2,320	11.63	187	13.41	209	14.16	17	0.09	101	0.51
	Electronic Equipment Repair	858	8.62	1,079	10.85	94	6.74	98	6.64	3	0.03	9	0.09
	Communications & Intelligence	849	7.76	1,073	9.80	101	7.24	104	7.05	5	0.05	28	0.26
	Healthcare	909	11.05	1,118	13.60	70	5.02	79	5.35	2	0.02	10	0.12
	Technical & Other Professional	400	9.73	493	11.99	36	2.58	37	2.51	1	0.02	7	0.17
	Functional Support & Admin	1,430	8.48	1,790	10.61	161	11.54	172	11.65	1	0.01	12	0.07
	Electrical & Mechanical Repair	2,361	10.06	2,837	12.09	322	23.08	334	22.63	9	0.04	23	0.10
	Craftwork & Construction	544	12.17	622	13.92	85	6.09	89	6.03	3	0.07	6	0.13
	Service, Transport & Supply	1,239	8.65	1,580	11.03	167	11.97	174	11.79	4	0.03	18	0.13
	Students, Trainees & Unknown Enlist	459	7.66	567	9.46	12	0.86	12	0.81	3	0.05	8	0.13
	Army	4,209	9.37	5,583	12.43	662	47.46	711	48.17	22	0.05	110	0.24
	Navy	2,293	8.63	2,730	10.27	291	20.86	300	20.33	8	0.03	26	0.10
	Air Force	2,285	8.82	2,724	10.51	205	14.70	214	14.50	7	0.03	20	0.08
	Marine Corps	1,560	8.86	1,861	10.57	77	5.52	83	5.62	11	0.06	65	0.37
	Coast Guard	488	14.77	581	17.58	0	0.00	0	0.00	0	0.00	1	0.03
OFFICER (all diagnoses combined)													
	Officer	1,886	7.81	2,324	9.63	160	11.47	168	11.38	3	0.01	21	0.09
	<20	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
	20-24	176	6.77	229	8.80	12	0.86	12	0.81	2	0.08	6	0.23
	25-29	375	6.89	472	8.67	40	2.87	41	2.78	0	0.00	3	0.06
	30-34	383	7.91	457	9.43	31	2.22	32	2.17	1	0.02	3	0.06
	35-39	367	7.57	438	9.03	42	3.01	44	2.98	0	0.00	5	0.10
	>=40	585	9.15	728	11.38	35	2.51	39	2.64	0	0.00	4	0.06
	O0-O3, W0-W3	1,097	7.44	1,366	9.26	111	7.96	117	7.93	3	0.02	15	0.10
	O4-O10, W4-W5	789	8.41	958	10.21	49	3.51	51	3.46	0	0.00	6	0.06
	General/Flag Ofc & Executives	22	10.96	26	12.96	2	0.14	2	0.14	0	0.00	0	0.00
	Tactical Operations Off.	595	7.05	732	8.68	59	4.23	60	4.07	3	0.04	14	0.17
	Intelligence Off.	95	6.63	122	8.52	15	1.08	15	1.02	0	0.00	2	0.14
	Engineering & Maintenance Off.	246	7.68	303	9.45	17	1.22	18	1.22	0	0.00	0	0.00
	Healthcare Off.	333	9.11	412	11.27	15	1.08	17	1.15	0	0.00	2	0.05
	Scientists & Professional Off.	98	7.13	124	9.03	7	0.50	7	0.47	0	0.00	0	0.00
	Administrative Off.	139	8.95	169	10.88	18	1.29	19	1.29	0	0.00	0	0.00
	Supply & Logistics Off.	150	7.58	186	9.40	25	1.79	28	1.90	0	0.00	2	0.10
	Students, Trainees & Unknown Off.	208	9.05	250	10.87	2	0.14	2	0.14	0	0.00	1	0.04
	Army	684	7.32	893	9.55	106	7.60	111	7.52	2	0.02	14	0.15
	Navy	431	8.22	517	9.87	18	1.29	20	1.36	0	0.00	2	0.04
	Air Force	515	7.85	614	9.36	26	1.86	27	1.83	0	0.00	1	0.02
	Marine Corps	160	7.45	188	8.76	10	0.72	10	0.68	1	0.05	4	0.19
	Coast Guard	96	11.48	112	13.39	0	0.00	0	0.00	0	0.00	0	0.00

1. Rates are per 1,000 person-years.

2. Use of ICD-9-CM E-codes for "cause of injury" is largely incomplete for theater healthcare records and therefore omitted.

3. Person-time is not available for deployers so the proportion of the total number of diagnoses is shown.

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Prepared by Armed Forces Health Surveillance Center (AFHSC)

Source: Defense Medical Surveillance System (DMSS) as of 29-MAR-2011

